

ASHRAE Leadership Recall (formerly Leadership Recalled)
Transcription

Interview of: Chuck Hansen

Date of Interview: June 20, 2004

Interviewed by: Ron Strong

Ron Strong

My name is Ron Strong on the occasion of the ASRE centennial celebration we are interviewing Mr. Chuck Hansen who became a member of ASRE in 1949. Chuck, would you give a brief biological-biographical sketch of your life please. Place of birth, etc, family...

Chuck Hansen

Ron, I was born, June 15, 1923 in Forest Park, Illinois which is a western suburb of Chicago, my father, I was officially Charles Christian Hansen the third. You know that's not so common now a days to do that, roman numeral three. My father was Charles C. Hansen Jr., my grandfather was Charles C. Hansen. My grandfather was sort of the guiding light toward us, our family getting into refrigeration, primarily myself. He was born in Aarhus, Denmark, came to the US under the sponsorship of a couple of aunts when he was sixteen years old. Interesting aspect relating to my possible not existing in the world, his aunts were informed that he was found dead in the street in Chicago about six months after he arrived in the US and they were asked to come to the morgue to identify the body. They went to the morgue and when he was on, when they took the sheet off of him they noticed his eyelids flickered so people managed, the doctors revived him and he was perfectly alright after that. So he proceeded to try to make his way in the US. He got a job at an ice plant. I think originally he was driving an ice delivery wagon. He got a job in the engine room turning compressors on, turning them off, adjusting expansion valves and shut off valves and watching the pressures. And as a result of experience and a lot of self study, he never had formal engineering education, he eventually became manager and eventually general manager of Peerless Ice Machine Company, one of the old time Chicago ammonia refrigeration companies. And he was there for some years, they were quite successful. And then he had a friendship with Mills, Mills Novelty Company who were also into refrigeration. Somehow they got involved in a player piano dispute, each claim to be the inventor of the player piano. So my grandfather got involved in serious lawsuits against Mill's Novelty Company which of course eventually became Mill's Jukeboxes. But as a result of that he licked his wounds and got out of that ordeal and decided to start his own business in his home in Forrest Park, Illinois. His first products, actually his first product based on his experience, the most dangerous place is the high side of refrigeration systems where things can happen real fast and be real dangerous. He developed a pretty simple device. A lot of the plants at that time were diesel engine driven. So if the head pressure was too high somebody had to shut off the fuel or equipment, so he developed a device, it was a heavy iron ball on an arm with the piston, pressure loaded piston that would trip the arm over center and the arm, ball probably weighed seven or eight

pounds, would shut off the fuel valve, the diesel fuel valve so the engine would shut off. Then as conversion occurred to electric, electric driven plants, he used the same mechanism to operate the knife switches of a 25 - 50 horsepower electric motor. So when the pressure go too high, same old thing. They called it, because it made such a noise when it was pushed over, the nickname was bingo on the high side, was the name that they developed. So from that he developed later operating from his home an automatic expansion valve. And then his two sons and daughter by then had matured, the brother-in-law and two sons came into the business. They had all served in World War I and after they came back from World War I they joined him to build the company Refrigerating Specialties Company which was founded as a corporation in 1916. So they built up that company and eventually expanded to control and condensing water regulators, pressure regulators and a lot of industrial refrigeration items. My grandfather died in 1930-31 and the three children, his daughter and two sons took over the business and ran it quite successfully. As a child I always knew of grandfather and he was the patriarch of the family and you know we always heard how wonderful he was. My grandmother had died earlier so we didn't see him very often except when he might be invited for dinner and I remember him as being sort of a bear like gracious guy who's a very good salesman. He was not only good technically but he was very good at selling a product.

R.S.

Like yourself.

C.H.

Well I wish I were as good a salesman. I'm more of a marketing guy than a salesman. I'm still primarily an inventor, believe it or not but I think. But anyhow as I was a child when I went to grade school, my family was not very religious so I went to the closest school which happened to be a German Lutheran school. It was four grades, the first four grades in one room and I went to that school and had Lutheran religion pumped into me very, very vigorously. And I was, at that time my career was going to be a Lutheran minister and it came time for me, after I finished the fourth grade to continue on to the main school, which was about a mile away. And when I entered that school I had to make the mile walk, there were no extra cars, no school buses for towns, most of the school buses were rural. So we, in the process of walking to the big school, we eventually found out that I had trouble walking. I had a problem with my hip. Well the doctors eventually found out that I had a disease called Perthes disease which was the deterioration of my bone in my hip so I had to have a cast from my waist to my toes on my right leg and from waist to mid thigh on the other leg for one year immobilized on special diet. And after that I was going to be on crutches for two years so I got out of the Lutheran school situation, went to the public school which was four blocks away which I could make on crutches. So from there I had then gone from the religious world to the secular world, went to regular public high schools and I enjoyed high school, even at that time I wanted to be a mechanical engineer. And one of the requirements was to interview a mechanical engineer. The mechanical engineer I interviewed worked for Burnage Ice Machine Company, my father knew of him. His name was Don Parkers, who was an ASRE member. He was chief engineer at Burnage Ice Machine Company. And that reinforced my idea that I wanted to be a mechanical engineer. He was a graduate of the University of Illinois. From there I had a pretty good record in school. I had a math teacher in school who helped me apply for scholarships and the best scholarship that I had was a four year full tuition engineering scholarship to Cornell University which I was very happy to accept. And then that was about the time of Pearl Harbor so didn't

know what was going to happen after that but I proceeded, went to Cornell University. I had never seen Cornell until I got off the Lehigh Valley Rail Road when it was time to enter in the fall. Got a taxi, went up the hill to my rooming house and that was the first I saw of Cornell University.

R.S.

And what year was that?

C.H.

That would have been 42, been 1942.

R.S.

So you weren't in the ASRE at that point?

C.H.

Well about that time I might have been in ASRE because we had an ASRE meeting in our mechanical engineering department, probably fifty or sixty people attending, all the mechanical people from the university and a lot of mechanical engineering students. It was before the vast majority of people were pulled out for the war. There were still quite a few people under ordinary situation at university. Civilians, they had not, Cornell had not at that time been converted to a military training base which it became within the next year. But Dr. Willis Carrier was on the docket and I was very happy to be able to hear him deliver an inspiring talk. Also amazed at the humility of the man, you know that the simplicity of his, the simplicity of his explanations of psychometrics and how he built the Carrier corporation. So that was, that was a highlight for me. I then, you know the war was on, I was able to, I was in the Army Reserve at that time because Cornell was an army R.O.T.C. school but our counselor advised us try to get into the Navy if you want to have more education because even at that time they knew there would be the European war first, the Pacific war second. (interruptions in video) whole reservoir of people for the invasion of Japan. So I (interruption in video) tens of thousands of men, you know a lot of officers are going to run the landing ships in to the battle of Japan. And of course after getting my commission everything, about that time Harry Truman dropped two A-bombs so we were all out of a job and the war was over which was great but I never did have anybody shoot at me. I was able to kind of ship for a while but never got out. I was behind schedule as far as getting into the war which some of us were disappointed at that but in retrospect that was nothing wrong with that, missing the war. I felt my engineering education, having been achieved under military conditions because we were calisthenics and military program under the B-12 program, rise at six in the morning for calisthenics, lights out at ten o'clock at night. So I think our engineering education perhaps was not up to standards. So after the war I decided I would continue engineering and the G.I. bill existed which is a great opportunity. So I applied to MIT to go for a masters degree in mechanical engineering, primarily because I felt I needed to reinforce my mechanical engineering. At MIT I took a refrigeration, I took cryogenic, my paper, my master's thesis was air to air heat exchange and in fact I was an instructor for the absorption refrigeration experiment which I enjoyed because I was teaching electrical engineers and chemical engineers who fortunately didn't know much about the subject. Not even the little that I knew but I did enjoy that and when I graduated from MIT, it was time to get a job and I took a job with Baker Refrigeration Corporation in South Windham, Maine. They were one of the, there were four really big ammonia refrigeration guys. There was York, Frick, Vilter, and Baker. They all built vertical twin cylinder vertical single acting compressors. They were all trying to get into higher speed machines. So I was hired as an assistant to the vice president of engineering at Baker in South Windham, Maine. And I

courted my wife down, my present wife down in Boston. Portland was about an hour and a half drive away. That's one of the reasons I took that job. But after about five or six months I found that Baker was trying to be converted from industrial refrigeration company to a commercial company by a group of Westinghouse executives and it wasn't going too well and I became disillusioned so I gave notice, packed my stuff in my car and drove back to Chicago and decided to look for a job in Chicago. When I got to Chicago I looked up my interviewee, Mr. Don Parkers who was still chief engineer, he had been a colonel in the, I think Field Artillery in World War II. And he was happy to see me and I got a job immediately. I was assistant chief engineer at Burnage Ice Machine Company. I had the pleasure of meeting Mr. Burnage who is the founder of Burnage Ice Machine Company, real old guy, round collars, roll top desk. Mr. Burnage personally knew Mr. J. L. Kraft when he delivered cheese in a horse and wagon and that friendship resulted in Burnage getting all of the refrigeration, most all of the refrigeration business for Kraft as it expanded all over the United States and a lot of export. At Burnage I did, typical contractor at that time, did ammonia, did Freon and of course there wasn't only Freon, there was only Freon 12. They still had jobs that were converting from sulfur dioxide and methyl chloride to Freon 12. So we work in both fluids. We would do anything we could get. We did air conditioning jobs, we did small walk in coolers, we did anything. We tried to do bigger work and gradually got into bidding the larger jobs. There was a lot of government work especially veterans administration hospitals. One of my assignments was to bid on veterans administration hospitals and we were successful in two or three veterans administration hospitals. I enjoyed being successful at some of those bids. Eventually they moved me to run their office in Milwaukee which was one serviceman, one telephone girl and myself. And I think we had the coldest summer on record in Milwaukee at that time and it was not going to well. I was not asked to leave but I just was not happy, not really contributing adequately to the company so I gave notice and left and went with a heat exchange manufacturer in Hammond, Indiana. I spent a year there and had a difference of opinion with the owner as far as rating air coils at that time and of course he had all the stock in the company so he said, Chuck I think you better go. So I needed a job and I went with Liquid Carbonic Corp. I was a product manager, engineering product manager for water chillers and carbonators both the large ones for beverage bottling and also the small ones for soda fountains. And it's at that time that I really became, well actually when I came back to Chicago at Burnage I became active in ASRE. I think that's when I officially joined ASRE. The ASRE chapter at that time, the Chicago chapter, it was very strong. We usually would get 100-150 people at meetings. Our population consisted of not only, maybe 20 percent 25 percent of ammonia industrial people but we had the air conditioning, refrigeration cycle people not the sheet metal people so much. But at that time very often the sheet metal people did their work and then other contractors would do the refrigeration cycle. So they were members of our chapter. You also had the supermarket people, hospital type people and also we had domestic refrigeration people. Hotpoint was in Chicago, Whirlpool was in Benton Harbor. So they would come for our meetings. In addition we had a lot of food technicians, frozen food people, meat packers were in Chicago. So it was a very strong chapter. And when the merger occurred, it was quite a shock to us because we had no inkling that this would or could happen. We knew of the heating and ventilating, the ASHVE chapter and we were friendly with them but we were not that close. So when the merger occurred we were all shocked.

R.S.

You weren't ready to ?

C.H.

Well I think we did try to attend their meetings but sort of lost in the shuffle, I mean it was shirts and skins in a way. Different interests, different types of programs. So, and at that time I was about thirty years of age and some of the old diehards of refrigeration said, Chuck, we know that it's possible to form a new chapter, we can't continue the old chapter but we can form a new one and we want you to be the guy to start the new chapter. So they did a lot of the paperwork. National, you know that was in the programs to start new chapters so we started a new chapter called the Chicago chapter it was primarily orientated toward refrigeration and it was quite successful for a while. Gradually the supermarket people dropped away, the domestic refrigerator people dropped away. Gradually the chapter became weaker and it was not due to the merger because we were very happy with, you know the papers, the data book, we got good representation. We had good representation on the committees, the technical work was good, the research in our field we felt was excellent, but there wasn't much we could do from slipping back downhill. The chapter just gradually, gradually deteriorated and I was very sad after what maybe 10 or 15 years, I think finally just folded up. It was after I was no longer very active in the chapter. Anyhow I bought that time, after I had been back in Chicago for 5 or 6 years, one of my uncles running Refrigerating Specialties Company died suddenly of a heart attack and my father and the other uncle didn't really know anything about the technical or mechanical aspects. The guy who died was the guy who, he was the chief engineer and president of the company so they asked me to come with the company, which I did. And, you know they portrayed it as the next General Motors. Actually it was 13 people in a pretty small plant that was made up of 4 store, 4 storefronts that were converted into one building referred to as the shop. So I took that thing over and tried to build it up by expanding the product lines. And it was about that time that all of us in the industry were shocked because it wasn't well publicized, we learned that the National Electrical Code was going to declare ammonia to be an explosive along with other quite explosive materials such as natural gas, butane, propane and all the equipment in any refrigeration plant containing ammonia would have to be explosion proof equipment including things that had nothing to do with refrigeration. All the switches for the lights, all of the lighting system, all the conduits. So we knew that this could put us all out of business so all those of us who had businesses rallied a quickly formed corporation, non-profit corporation, came up with the name International Institute of Ammonia Refrigeration and that was our big task. And we were successful. It took about two years to get the National Electrical Code to make enough alterations that we could live with it. Primarily confining the requirements to the engine room.

R.S.

And we thank you for that. Are we miked?

(Someone off screen)

We're using the on camera mike which seemed to be better than the non camera.

C.H.

Ron, I've been doing all the talking. Pardon?

R.S.

So what year was that?

C.H.

Oh gosh.

R.S.

Seventy five, I think was the first year.

C.H.

That must have been about it. Well it might have been the first meeting, actually we had the organization going before we had a national meeting. Perhaps one or two years before we actually had a meeting. That was a major step then too. I think the first job was to get that problem solved. And then like anything, it gets going, okay now let's have this organization on standby in case there's another emergency. That was the original intent. And so we better get more members, user members. We needed more user members. It was primarily the manufacturers who rallied for this first achievement on a National Electric Code.

R.S.

Well I think there were a few more emergencies since then.

C.H.

Many, many.

R.S.

The EPA, and all those people. So you took over Refrigerating Specialties, which is a well known valve company, in what year?

C.H.

Oh, let's see when was that, about 1953-54 approximately. That's when my uncle died and they said take it over, we want to retire. Of course once I got in there I was doing all the work so they did not want to retire so I had sort of a battle with them. They were then 65 or so. And so I had a battle with them and I had to threaten to leave a couple times. And they finally agreed. I came up with a price that was three times what my accountant said it was possibly worth and so I had notices to sign for 10 years and I paid them off in 6 which made them think that they had sold out too cheap instead of being happy with their money. But we just developed new product lines. I was fortunate to get good strong people. My experience, I think in ASHRAE and in the industry generally, put me in a position to know where good people were available not necessarily from competitors but very often coming from related fields. And so using that as a base, we built the company over the next 20 years to maybe, well we built it up to maybe 10 or 20 times what it was when I took it over.

R.S.

At least.

C.H.

Probably more than that. Well we were lucky, not only it's what we did but the industry grew that's what helped us. And all we had to do was just grow with the industry, maybe try to grow a little faster than the industry

R.S.

And in the 50s what were the major issues facing the refrigeration industry?

C.H.

Well I think it was always safety. At that time there was a constant battle between Freon and ammonia. There was a tendency for each refrigerant manufacturer, refrigerant people to tend to insult the other and-

R.S.

That doesn't happen anymore

C.H.

But I think eventually we reached a Mexican standoff on that. There was less of the name calling. I would say that was one of the problems I think from the ammonia refrigeration standpoint. Rooftops came in very strong and we had to battle to improve the efficiency of ammonia plants and do things that would make erection and it wasn't manufactures but the contractors also made great strides at being able to put in bigger plants at lower cost. Screw compressor came along and that made it possible to economically build big plants. And plants became very competitive with rooftops. So the battle of the rooftops at that time was, was not air-conditioning but refrigeration and low temperature refrigeration. The central engine room plants gradually dominated especially as the plants became so large that they have a plant with rooftops you might need 30 or 40 rooftops which has tremendous maintenance problem. Then I would say the other problem was having enough people, enough trained people. Of course we had another affiliate organization, RITA who was involved in the training of technicians and that was always a problem. There's always a shortage of enough people that knew ammonia industrial refrigeration. So we tried to do whatever we could to help that. From an engineering standpoint I think ASHRAE was at the engineering level, where as RITA was at the technician level. The real shortage was more in technicians but there was also a need for more refrigeration engineers.

R.S.

So from a man part point of view nothing much has changed in 50 years. Other than your grandfather was people stand out?

C.H.

Well I would say that it was my grandfather. It was also Don Parkers, the guy at Burnage Ice Machine Company. He was a very honorable guy, very good engineer, very soft spoken kind of guy who would give a person a job. He gave me compete authority to do my job so he would look over my shoulder just barely. I think he taught me that that's a good way to operate. You can't possibly do everything yourself. You have to depend, you have to get good people and depend on them doing the job and just occasional look over their shoulder surreptitiously to see how things are going. So I would say those people are the primary ones that influence me.

R.S.

Any advice that you would give a young person entering the refrigeration field?

C.H.

The thing I would say is that this is a great field, enter it be prepared to spend your life in it. You can't get into refrigeration for 10 years and decide to go to electronics. First of all you want to have the knowhow but second you will have trouble extricating yourself from all the friendships and all the knowledge that you developed, all the little tricks that you developed. So but once you come into it it's a very rewarding and satisfying field from the technical standpoint from the fact that it's a growing industry because a lot of it, well air-conditioning I cannot speak for but refrigeration, industrial refrigeration tied to food and food production is steadily growing with the population and with the improvement of standard of living. So it's a good growing field. It's also a changing field. The technology is constantly changing over a period of 10 years. Like the screw compressor, the re-circulating systems, the scale of the plants, the type of evaporators, is constantly changing so it's exciting from that standpoint, from a person coming into it and being constantly challenged.

R.S.

You have any other comments you'd like to throw into this interview?

C.H.

I would say mostly that I've been very happy that I came into the refrigeration field. I made a lot of friends, I've had a lot of challenges and a lot of achievements that I'm proud of. I have had a lot of friends that have helped me along the way. I appreciate all the help they've given me in being successful in my career and my businesses.

R.S.

Well I've only been in the industry for about 41 years and your name certainly stands out as one of the pioneers of the industry and I'd like to thank you for taking the time to come and talk to us.

C.H.

Appreciate your invitation.